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Rabbit Anti-phospho-STAT1 (Tyr701) antibody

SL1657R

Product Name:	phospho-STAT1 (Tyr701)
Chinese Name:	磷酸化Signal transduction与转录激活因子1抗体
Alias:	STAT1 (phospho Y701); p-STAT1 (phospho Y701); Phospho-Stat1（pTyr701）; STAT1(Phospho-Tyr701); signal transducers and activators of transcription 1; DKFZp686B04100; ISGF 3; Phosphorylated Stat1(pTyr701); Signal transducer and activator of transcription 1 91kDa; Signal transducer and activator of transcription 1 alpha/beta; STAT 1; STAT 91; STAT91; Transcription factor ISGF 3 components p91 p84.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,Rabbit,Sheep,
Applications:	ELISA=1:500-1000IHC-P=1:400-800Flow-Cyt=1μg /test（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	82kDa
Cellular localization:	The nucleuscytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated Synthesised phosphopeptide derived from human STAT1 around the phosphorylation site of tyrosine 701:TG(p-Y)IK
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

PubMed:	PubMed
Product Detail:	The protein encoded by this gene is a member of the STAT protein family. In response to cytokines and growth factors, STAT family members are phosphorylated by the receptor associated kinases, and then form homo- or heterodimers that translocate to the cell nucleus where they act as transcription activators. This protein can be activated by various ligands including interferon-alpha, interferon-gamma, EGF, PDGF and IL6. This protein mediates the expression of a variety of genes, which is thought to be important for cell viability in response to different cell stimuli and pathogens. Two alternatively spliced transcript variants encoding distinct isoforms have been described. [provided by RefSeq]. **Function:** Signal transducer and activator of transcription that mediates signaling by interferons (IFNs). Following type I IFN (IFN-alpha and IFN-beta) binding to cell surface receptors, Jak kinases (TYK2 and JAK1) are activated, leading to tyrosine phosphorylation of STAT1 and STAT2. The phosphorylated STATs dimerize, associate with ISGF3G/IRF-9 to form a complex termed ISGF3 transcription factor, that enters the nucleus. ISGF3 binds to the IFN stimulated response element (ISRE) to activate the transcription of interferon stimulated genes, which drive the cell in an antiviral state. In response to type II IFN (IFN-gamma), STAT1 is tyrosine- and serine-phosphorylated. It then forms a homodimer termed IFN-gamma-activated factor (GAF), migrates into the nucleus and binds to the IFN gamma activated sequence (GAS) to drive the expression of the target genes, inducing a cellular antiviral state. **Subcellular Location:** Cytoplasm. Nucleus. Translocated into the nucleus in response to IFN-gamma-induced tyrosine phosphorylation and dimerization. **Post-translational modifications:** Post-translational modificationsPhosphorylated on tyrosine and serine residues in response to IFN-alpha, IFN-gamma, PDGF and EGF. Phosphorylation on Tyr-701 (lacking in beta form) by JAK promotes dimerization and subsequent translocation to the nucleus. Phosphorylation on Ser-727 by several kinases including MAPK14, ERK1/2 and CAMKII on IFN-gamma stimulation, regulates STAT1 transcriptional activity. Phosphorylation on Ser-727 promotes sumoylation though increasing interaction with PIAS. Phosphorylation on Ser-727 by PKCdelta induces apoptosis in response to DNA-damaging agents. Sumoylated by SUMO1, SUMO2 and SUMO3. Sumoylation is enhanced by IFN-gamma-induced phosphorylation on Ser-727, and by interaction with PIAS proteins. Enhances the transactivation activity. ISGylated. **DISEASE:** Note=STAT1 deficiency results in impaired immune response leading to severe mycobacterial and viral diseases. In the case of complete deficiency, patients can die of viral disease. Defects in STAT1 are a cause of mendelian susceptibility to mycobacterial disease (MSMD) [MIM:209950]; also known as familial disseminated atypical mycobacterial

infection. This rare condition confers predisposition to illness caused by moderately virulent mycobacterial species, such as Bacillus Calmette-Guerin (BCG) vaccine and environmental non-tuberculous mycobacteria, and by the more virulent Mycobacterium tuberculosis. Other microorganisms rarely cause severe clinical disease in individuals with susceptibility to mycobacterial infections, with the exception of Salmonella which infects less than 50% of these individuals. The pathogenic mechanism underlying MSMD is the impairment of interferon-gamma mediated immunity whose severity determines the clinical outcome. Some patients die of overwhelming mycobacterial disease with lepromatous-like lesions in early childhood, whereas others develop, later in life, disseminated but curable infections with tuberculoid granulomas. MSMD is a genetically heterogeneous disease with autosomal recessive, autosomal dominant or X-linked inheritance.

Similarity:
Belongs to the transcription factor STAT family.
Contains 1 SH2 domain.

SWISS:
P42224

Gene ID:
6772

Database links:

Entrez Gene: 6772Human

Entrez Gene: 20846Mouse

Entrez Gene: 25124Rat

Omim: 600555Human

SwissProt: P42224Human

SwissProt: P42225Mouse

Unigene: 642990Human

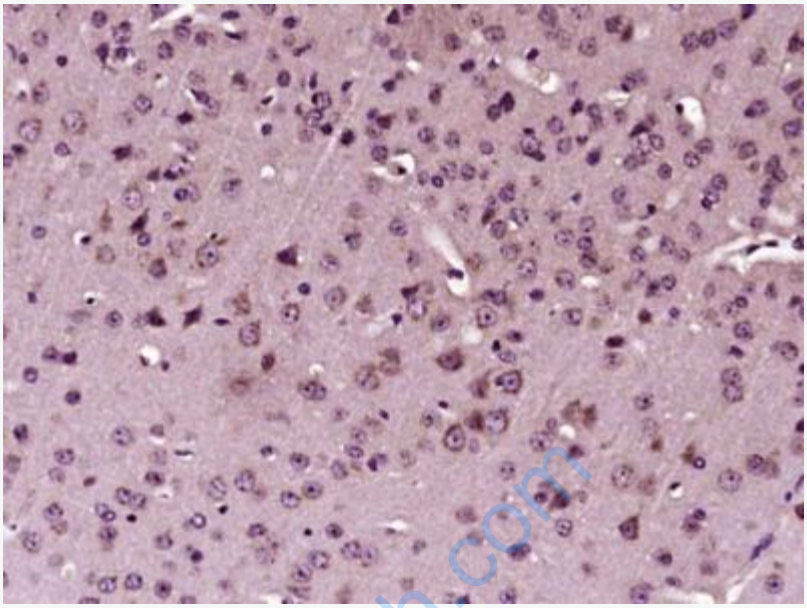
Unigene: 277406Mouse

Unigene: 33229Rat

Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

transcriptional regulatory factor

Picture:



Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (phospho-STAT1 (Tyr701)) Polyclonal Antibody, Unconjugated (SL1657R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

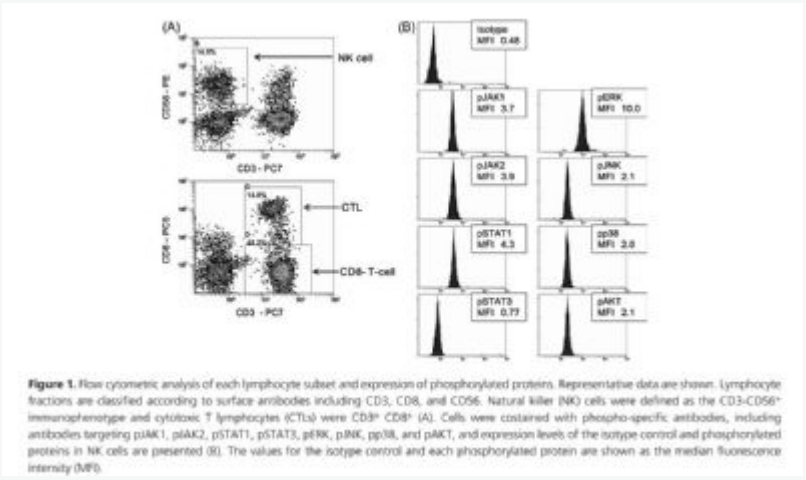


Figure 1. Flow cytometric analysis of each lymphocyte subset and expression of phosphorylated proteins. Representative data are shown. Lymphocyte fractions are classified according to surface antibodies including CD3, CD8, and CD56. Natural killer (NK) cells were defined as the $CD3^-CD56^+$ immunophenotype and cytotoxic T lymphocytes (CTLs) were $CD3^+$ $CD8^+$ (A). Cells were costained with phospho-specific antibodies, including antibodies targeting pJAK1, pJAK2, pSTAT1, pSTAT3, pERK, pJNK, pp38, and pAKT, and expression levels of the isotype control and phosphorylated proteins in NK cells are presented (B). The values for the isotype control and each phosphorylated protein are shown as the median fluorescence intensity (MFI).

	From《Cancer Medicine》(2016.6): PublitionDirect effect of dasatinib on signal transduction pathways associated with a rapid mobilization of cytotoxic lymphocytes , IF:2.5 Author: Noriyoshi Iriyama, Yoshihiro Hatta & Masami Takei Division of Hematology and Rheumatology, Department of Medicine, Nihon University School of Medicine, Tokyo, Japan